

**This Page Is Inserted by IFW Operations
and is not a part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- **BLACK BORDERS**
- **TEXT CUT OFF AT TOP, BOTTOM OR SIDES**
- **FADED TEXT**
- **ILLEGIBLE TEXT**
- **SKEWED/SLANTED IMAGES**
- **COLORED PHOTOS**
- **BLACK OR VERY BLACK AND WHITE DARK PHOTOS**
- **GRAY SCALE DOCUMENTS**

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

SEQUENCE LISTING

<110> TALL, ALAN R
WELCH, CARRIE L
LIANG, CHIEN-PING

<120> ATHEROSCLEROSIS SUSECPTIBILITY GENE LOCUS 1 (ATHSQ1) AND ATHEROSCLERO
SIS
SUSCEPTIBILITY GENE LOCUS 2 (ATHSQ2)

<130> 0575/64077

<160> 40

<170> PatentIn version 3.1

<210> 1
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 1
accccaagac gtgctcccag gatga 25

<210> 2
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 2
cgcagtgtctc ctcatctgac ttgt 24

<210> 3
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 3
aggatctcgt cgtgacccat ggcga 25

<210> 4
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 4
gagcggcgat accgtaaagc acgagg 26

<210> 5
 <211> 17
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 5
 tgtgctgatg caggcac

17

<210> 6
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 6
 gagaggaatg ctggtaggca

20

<210> 7
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 7
 gatgtcagaa tacagatata gca

23

<210> 8
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 8
 gttgcagtgg caccctttaa

20

<210> 9
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 9
 atgacttttg atgacaagat gaagcctgcg

30

<210> 10
 <211> 30

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 10
 cttctcatgg tcttctccag aatctttaga

30

<210> 11
 <211> 1092
 <212> DNA
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> B-Isoform 1

<400> 11
 atgacttttg atgacaagat gaagcctgcg aatgacgagc ctgacagaa gtcattgtggc 60
 aagaagccta aaggtctgca tttgctttct tccccatggg gggtccctgc tgctatgact 120
 ctggatcatcc tctgcttggg gttgtcagtg acccttattg tacagtggag acaattacgc 180
 caggtatctg acctcttaaa acaataccaa gcgaacctta ctgagcagga tcgtatcctg 240
 gaagggcaga tgtagacca gcagaaggca gaaaacactt cacaggaatc aaagaaggaa 300
 ctgaaaggaa agatagacac cctcaccagc aagctgaacg agaaatccaa agagcaggag 360
 gagcttctac agaagaatca gaacctccaa gaagcctgac aaagagctgc aaactcttca 420
 gaggagtccc agagagaact caagggaaag atagacacca tcaccgggaa gctggacgag 480
 aaatccaaag agcaggagga gcttctgcag atgattcaga acctccaaga agccctgcag 540
 agagctgcaa actcttcaga ggagtcaccg agagaactca agggaaagat agacaccctc 600
 accttgaagc tgaacgagaa atccaaagag caggaggagc ttctacagaa gaatcagaac 660
 ctccaagaag cctgcaaag agctgcaaac ttttcaggtc cttgtccaca agactgggctc 720
 tggcataaag aaaactgtta cctcttccat gggcccctta gctgggaaaa aaaccggcag 780
 acctgccaat ctttgggtgg ccagttacta caaattaatg gtgcagatga tctgacattc 840
 atcttacaag caatttccca taccacctcc ccgttctgga ttggattgca tcggaagaag 900
 cctggccaac catggctatg ggagaatgga actcctttga attttcaatt ctttaagacc 960
 aggggcgctt ctttacagct actcctttga attttcaatt ctttaagacc aggggcgctt 1020
 ctttacagct aaaactgcat tctaattgca ttcagcatat gtcagaagaa gacaaatcat 1080
 ttgcaaattt ag 1092

<210> 12
 <211> 1192
 <212> DNA

<213> Murinae gen. sp.

<220>

<221> misc_feature

<223> M-Isoform 1

<400> 12

```

atgacttttg atgacaagat gaagcctgcg aatgacgagc ctgatcagaa gtcattgtggc      60
aagaagccta aaggtctgca ttgtctttct tcccatgtgt ggttccctgc tgctatgact      120
ctgggtcatcc tctgctgtgt gttgtcagtg acccttattg tacagtggac acaattacgc      180
caggtatctg acctcttaaa acaataccaa gcgaacctta ctcagcagga tcgtatcctg      240
gaagggcaga tgtagccca gcagaaggca gaaaacactt cacaggaatc aaagaaggaa      300
ctgaaaggaa agatagacac cctcaccag aagctgaacg agaaatcaa agagcaggag      360
gagcttctac agaagaatca aagctgaacg agaaatcaa agagcaggag gagcttctac      420
agaagaatca gaacctcaa gaagccctgc aaagagctgc aaactcttca gaggagtccc      480
gaacctcaa gaagccctgc aaagagctgc aaactcttca gaggagtccc agagagaact      540
caagggaaag atagacacca tcacccggaa gctggacgag aaatccaaag agcaggagga      600
gcttctgcag atgattcaga acctccaaga agcctgagc agagctgcaa actcttcaga      660
ggagtcccag agagaactca agggaaagat agacaccctc accttgaagc tgaacgagaa      720
atccaaagag caggaggagc ttctacagaa gaatcagaac ctccaagaag cctgcaaag      780
agctgcaaac ttttcagggtc cttgtccaca agactggctc tggcataaag aaaactgtta      840
cctcttccat gggcccttta gctgggaaaa aaaccggcag acctgccaat ctttgggtgg      900
ccagttacta caaattaatg gtgcagatga tctgacattc atcttacaag caatttccca      960
taccacctcc ccattctgga ttggattgca tcggaagaag cctggccaac catggctatg     1020
ggagaatgga actcctttga attttcaatt ctttaagacc aggggcgttt ctttacagct     1080
atattcatca ggcaactgtg cataccttca agacggagct gtgttcgctg aaaactgcat     1140
tctaattgca ttcagcatat gtcagaagaa gacaaatcat ttgcaaattt ag              1192

```

<210> 13

<211> 744

<212> DNA

<213> Murinae gen. sp.

<220>

<221> CDS

<222> (1)..(744)

<223>

<220>

<221> misc_feature

<223> Isoform 7

<400> 13
 atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag 48
 Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
 1 5 10 15

 aag tca tgt ggc aag aag cct aaa gag gag tcc cag aga gaa ctc aag 96
 Lys Ser Cys Gly Lys Lys Pro Lys Glu Glu Ser Gln Arg Glu Leu Lys
 20 25 30

 gga aag ata gac acc atc acc cgg aag ctg gac gag aaa tcc aaa gag 144
 Gly Lys Ile Asp Thr Ile Thr Arg Lys Leu Asp Glu Lys Ser Lys Glu
 35 40 45

 cag gag gag ctt ctg cag atg att cag aac ctc caa gaa gcc ctg cag 192
 Gln Glu Glu Leu Leu Gln Met Ile Gln Asn Leu Gln Glu Ala Leu Gln
 50 55 60

 aga gct gca aac tct tca gag gag tcc cag aga gaa ctc aag gga aag 240
 Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln Arg Glu Leu Lys Gly Lys
 65 70 75 80

 ata gac acc ctc acc ttg aag ctg aac gag aaa tcc aaa gag cag gag 288
 Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser Lys Glu Gln Glu
 85 90 95

 gag ctt cta cag aag aat cag aac ctc caa gaa gcc ctg caa aga gct 336
 Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala Leu Gln Arg Ala
 100 105 110

 gca aac ttt tca ggt cct tgt cca caa gac tgg ctc tgg cat aaa gaa 384
 Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu Trp His Lys Glu
 115 120 125

 aac tgt tac ctc ttc cat ggg ccc ttt ggc tgg gaa aaa aac cgg cag 432
 Asn Cys Tyr Leu Phe His Gly Pro Phe Gly Trp Glu Lys Asn Arg Gln
 130 135 140

 acc tgc caa tct ttg ggt ggc cag tta cta caa att aat ggt gca gat 480
 Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile Asn Gly Ala Asp
 145 150 155 160

 gat ctg aca ttc atc tta caa gca att tcc cat acc acc tcc cca ttc 528
 Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr Thr Ser Pro Phe
 165 170 175

 tgg att gga ttg cat cgg aag aag cct ggc caa cca tgg cta tgg gag 576
 Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro Trp Leu Trp Glu
 180 185 190

 aat gga act cct ttg aat ttt caa ttc ttt aag acc agg ggc gtt tct 624
 Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr Arg Gly Val Ser
 195 200 205

 tta cag cta tat tca tca agc aac tgt gca tac ctt caa gac gga gct 672
 Leu Gln Leu Tyr Ser Ser Ser Asn Cys Ala Tyr Leu Gln Asp Gly Ala
 210 215 220

 gtg ttc gct gaa aac tgc att cta att gca ttc agc ata tgt cag aag 720
 Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser Ile Cys Gln Lys
 225 230 235 240

aag aca aat cat ttg caa att tag
 Lys Thr Asn His Leu Gln Ile
 245

<210> 14
 <211> 247
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> Isoform 7

<400> 14

Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
 1 5 10 15

Lys Ser Cys Gly Lys Lys Pro Lys Glu Glu Ser Gln Arg Glu Leu Lys
 20 25 30

Gly Lys Ile Asp Thr Ile Thr Arg Lys Leu Asp Glu Lys Ser Lys Glu
 35 40 45

Gln Glu Glu Leu Leu Gln Met Ile Gln Asn Leu Gln Glu Ala Leu Gln
 50 55 60

Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln Arg Glu Leu Lys Gly Lys
 65 70 75 80

Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser Lys Glu Gln Glu
 85 90 95

Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala Leu Gln Arg Ala
 100 105 110

Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu Trp His Lys Glu
 115 120 125

Asn Cys Tyr Leu Phe His Gly Pro Phe Gly Trp Glu Lys Asn Arg Gln
 130 135 140

Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile Asn Gly Ala Asp
 145 150 155 160

Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr Thr Ser Pro Phe
 165 170 175

Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro Trp Leu Trp Glu
 180 185 190

Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr Arg Gly Val Ser
195 200 205

Leu Gln Leu Tyr Ser Ser Ser Asn Cys Ala Tyr Leu Gln Asp Gly Ala
210 215 220

Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser Ile Cys Gln Lys
225 230 235 240

Lys Thr Asn His Leu Gln Ile
245

<210> 15
<211> 606
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1)..(606)
<223>

<220>
<221> misc_feature
<223> Isoform 8

<400> 15
atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag 48
Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15
aag tca tgt ggc aag aag cct aaa gag gag tcc cag aga gaa ctc aag 96
Lys Ser Cys Gly Lys Lys Pro Lys Glu Glu Ser Gln Arg Glu Leu Lys
20 25 30
gga aag ata gac acc ctc acc ttg aag ctg aac gag aaa tcc aaa gag 144
Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser Lys Glu
35 40 45
cag gag gag ctt cta cag aag aat cag aac ctc caa gaa gcc ctg caa 192
Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala Leu Gln
50 55 60
aga gct gca aac ttt tca ggt cct tgt cca caa gac tgg ctt tgg cat 240
Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu Trp His
65 70 75 80
aaa gaa aac tgt tac ctc ttc cat ggg ccc ttt agc tgg gaa aaa aac 288
Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu Lys Asn
85 90 95
cgg cag acc tgc caa tct ttg ggt ggc cag tta cta caa att aat ggt 336
Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile Asn Gly
100 105 110
gca gat gat ctg aca ttc atc tta caa gca att tcc cat acc acc tcc 384

Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr Thr Ser
115 120 125

cca ttc tgg att gga ttg cat cgg aag aag cct ggc caa cca tgg cta 432
Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro Trp Leu
130 135 140

tgg gag aat gga act cct ttg aat ttt caa ttc ttt aag acc agg ggc 480
Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr Arg Gly
145 150 155 160

gtt tct tta cag cta tat tca tca ggc aac tgt gca tac ctt caa gac 528
Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu Gln Asp
165 170 175

gga gct gtg ttc gct gaa aac tgc att cta att gca ttc agc ata tgt 576
Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser Ile Cys
180 185 190

cag aag aag aca aat cat ttg caa att tag 606
Gln Lys Lys Thr Asn His Leu Gln Ile
195 200

<210> 16
<211> 201
<212> PRT
<213> Murinae gen. sp.

<220>
<221> misc_feature
<223> Isoform 8

<400> 16

Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15

Lys Ser Cys Gly Lys Lys Pro Lys Glu Glu Ser Gln Arg Glu Leu Lys
20 25 30

Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser Lys Glu
35 40 45

Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala Leu Gln
50 55 60

Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu Trp His
65 70 75 80

Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu Lys Asn
85 90 95

Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile Asn Gly
100 105 110

Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr Thr Ser
115 120 125

Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro Trp Leu
130 135 140

Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr Arg Gly
145 150 155 160

Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu Gln Asp
165 170 175

Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser Ile Cys
180 185 190

Gln Lys Lys Thr Asn His Leu Gln Ile
195 200

<210> 17
<211> 468
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1)..(468)
<223>

<220>
<221> misc_feature
<223> Isoform 9

<400> 17
atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag 48
Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15
aag tca tgt ggc aag aag cct aaa ggt cct tgt cca caa gac tgg ctc 96
Lys Ser Cys Gly Lys Lys Pro Lys Gly Pro Cys Pro Gln Asp Trp Leu
20 25 30
tgg cat aaa gaa aac tgt tac ctc ttc cat ggg ccc ttt agc tgg gaa 144
Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu
35 40 45
aaa aac cgg cag acc tgc caa tct ttg ggt ggc cag tta cta caa att 192
Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile
50 55 60
aat ggt gca gat gat ctg aca ttc atc tta caa gca att tcc cat acc 240
Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr
65 70 75 80
acc tcc cca ttc tgg att gga ttg cat cgg aag aag cct ggc caa cca 238
Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro

| 85 | | | | | | | | | | 90 | | | | | 95 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| tgg | cta | tgg | gag | aat | gga | act | cct | ttg | aat | ttt | caa | ttc | ttt | aag | acc | 336 | | | | |
| Trp | Leu | Trp | Glu | Asn | Gly | Thr | Pro | Leu | Asn | Phe | Gln | Phe | Phe | Lys | Thr | | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | | |
| agg | ggc | gtt | tct | tta | cag | cta | tat | tca | tca | ggc | aac | tgt | gca | tac | ctt | 384 | | | | |
| Arg | Gly | Val | Ser | Leu | Gln | Leu | Tyr | Ser | Ser | Gly | Asn | Cys | Ala | Tyr | Leu | | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | | |
| caa | gac | gga | gct | gtg | ttc | gct | gaa | aac | tgc | att | cta | att | gca | ttc | agc | 432 | | | | |
| Gln | Asp | Gly | Ala | Val | Phe | Ala | Glu | Asn | Cys | Ile | Leu | Ile | Ala | Phe | Ser | | | | | |
| | | 130 | | | | 135 | | | | | 140 | | | | | | | | | |
| ata | tgt | cag | aag | aag | aca | aat | cat | ttg | caa | att | tag | | | | | 468 | | | | |
| Ile | Cys | Gln | Lys | Lys | Thr | Asn | His | Leu | Gln | Ile | | | | | | | | | | |
| | | | | | 150 | | | | | 155 | | | | | | | | | | |

<210> 18
 <211> 155
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> Isoform 9

<400> 18

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Thr | Phe | Asp | Asp | Lys | Met | Lys | Pro | Ala | Asn | Asp | Glu | Pro | Asp | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Ser | Cys | Gly | Lys | Lys | Pro | Lys | Gly | Pro | Cys | Pro | Gln | Asp | Trp | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | His | Lys | Glu | Asn | Cys | Tyr | Leu | Phe | His | Gly | Pro | Phe | Ser | Trp | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asn | Arg | Gln | Thr | Cys | Gln | Ser | Leu | Gly | Gly | Gln | Leu | Leu | Gln | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Gly | Ala | Asp | Asp | Leu | Thr | Phe | Ile | Leu | Gln | Ala | Ile | Ser | His | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Pro | Phe | Trp | Ile | Gly | Leu | His | Arg | Lys | Lys | Pro | Gly | Gln | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Leu | Trp | Glu | Asn | Gly | Thr | Pro | Leu | Asn | Phe | Gln | Phe | Phe | Lys | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Val | Ser | Leu | Gln | Leu | Tyr | Ser | Ser | Gly | Asn | Cys | Ala | Tyr | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Asp | Gly | Ala | Val | Phe | Ala | Glu | Asn | Cys | Ile | Leu | Ile | Ala | Phe | Ser |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

130

135

140

Ile Cys Gln Lys Lys Thr Asn His Leu Gln Ile
 145 150 155

<210> 19
 <211> 1092
 <212> DNA
 <213> Murinae gen. sp.

<220>
 <221> CDS
 <222> (1)..(1092)
 <223>

<220>
 <221> misc_feature
 <223> Isoform 1

<400> 19
 atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag 48
 Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
 1 5 10 15
 aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca 96
 Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro
 20 25 30
 tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg 144
 Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
 35 40 45
 tca gtg acc ctt att gta cag tgg aca caa tta cgc cag gta tct gac 192
 Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp
 50 55 60
 ctc tta aaa caa tac caa gcg aac ctt act cag cag gat cgt atc ctg 240
 Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu
 65 70 75 80
 gaa ggg cag atg tta gcc cag cag aag gca gaa aac act tca cag gaa 288
 Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Gln Glu
 85 90 95
 tca aag aag gaa ctg aaa gga aag ata gac acc ctc acc cag aag ctg 336
 Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu
 100 105 110
 aac gag aaa tcc aaa gag cag gag gag ctt cta cag aag aat cag aac 384
 Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn
 115 120 125
 ctc caa gaa gcc ctg caa aga gct gca aac tct tca gag gag tcc cag 432
 Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln
 130 135 140
 aga gaa ctc aag gga aag ata gac acc atc acc cgg aag ctg gac gag 480
 Arg Glu Leu Lys Gly Lys Ile Asp Thr Ile Thr Arg Lys Leu Asp Glu
 145 150 155 160

aaa tcc aaa gag cag gag gag ctt ctg cag atg att cag aac ctc caa 528
 Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Met Ile Gln Asn Leu Gln 175
 165 170 175
 gaa gcc ctg cag aga gct gca aac tct tca gag gag tcc cag aga gaa 576
 Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln Arg Glu 190
 180 185 190
 ctc aag gga aag ata gac acc ctc acc ttg aag ctg aac gag aaa tcc 624
 Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser 205
 195 200 205
 aaa gag cag gag gag ctt cta cag aag aat cag aac ctc caa gaa gcc 672
 Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala 220
 210 215 220
 ctg caa aga gct gca aac ttt tca ggt cct tgt cca caa gac tgg ctc 720
 Leu Gln Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu 240
 225 230 235
 tgg cat aaa gaa aac tgt tac ctc ttc cat ggg ccc ttt agc tgg gaa 768
 Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu 255
 245 250 255
 aaa aac cgg cag acc tgc caa tct ttg ggt ggc cag tta cta caa att 816
 Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile 270
 260 265 270
 aat ggt gca gat gat ctg aca ttc atc tta caa gca att tcc cat acc 864
 Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr 285
 275 280 285
 acc tcc cca ttc tgg att gga ttg cat cgg aag aag cct ggc caa cca 912
 Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro 300
 290 295 300
 tgg cta tgg gag aat gga act cct ttg aat ttt caa ttc ttt aag acc 960
 Trp Leu Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr 320
 305 310 315
 agg ggc gtt tct tta cag cta tat tca tca ggc aac tgt gca tac ctt 1008
 Arg Gly Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu 335
 325 330 335
 caa gac gga gct gtg ttc gct gaa aac tgc att cta att gca ttc agc 1056
 Gln Asp Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser 350
 340 345 350
 ata tgt cag aag aag aca aat cat ttg caa att tag 1092
 Ile Cys Gln Lys Lys Thr Asn His Leu Gln Ile 360
 355 360

<210> 20
 <211> 363
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> Isoform 1

<400> 20

Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15

Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro
20 25 30

Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
35 40 45

Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp
50 55 60

Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu
65 70 75 80

Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Gln Glu
85 90 95

Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu
100 105 110

Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn
115 120 125

Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln
130 135 140

Arg Glu Leu Lys Gly Lys Ile Asp Thr Ile Thr Arg Lys Leu Asp Glu
145 150 155 160

Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Met Ile Gln Asn Leu Gln
165 170 175

Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln Arg Glu
180 185 190

Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu Lys Ser
195 200 205

Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn Leu Gln Glu Ala
210 215 220

Leu Gln Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro Gln Asp Trp Leu
225 230 235 240

Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro Phe Ser Trp Glu

245 250 255

Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln Leu Leu Gln Ile
260 265 270

Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala Ile Ser His Thr
275 280 285

Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys Lys Pro Gly Gln Pro
290 295 300

Trp Leu Trp Glu Asn Gly Thr Pro Leu Asn Phe Gln Phe Phe Lys Thr
305 310 315 320

Arg Gly Val Ser Leu Gln Leu Tyr Ser Ser Gly Asn Cys Ala Tyr Leu
325 330 335

Gln Asp Gly Ala Val Phe Ala Glu Asn Cys Ile Leu Ile Ala Phe Ser
340 345 350

Ile Cys Gln Lys Lys Thr Asn His Leu Gln Ile
355 360

<210> 21
<211> 773
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1)..(174)
<223>

<220>
<221> misc_feature
<223> Isoform 2

<400> 21
atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag 48
Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15

aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca 96
Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro
20 25 30

tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg 144
Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
35 40 45

tca gtg acc ctt att gta cag tgg aca caa tgatcgtatc ctggaagggc 194
Ser Val Thr Leu Ile Val Gln Trp Thr Gln
50 55

```

agatgttagc ccagcagaag gcagaaaaca cttcacagga atcaaagaag gaactgaaag 254
gaaagataga caccctcacc cagaagctga acgagaaatc caaagagcag gaggagcttc 314
tacagaagaa tcagaacctc caagaagccc tgcaaagagc tgcaaactct tcagaggagt 374
cccagagaga actcaaggga aagatagaca ccatcacccg gaagctggac gagaaatcca 434
aagagcagga ggagcttctg cagatgattc agaacctcca agaagccctg cagagagctg 494
caaactcttc agaggagtcc cagagagaac tcaagggaaa gatagacacc ctcaccttga 554
agctgaacga gaaatccaaa gagcaggagg agcttctaca gaagaatcag aacctccaag 614
aagccctgca aagagctgca aacttttcag gtccttgtcc acaagactgg ctctggcata 674
aagaaaactg ttacctcttc cgtgggccct ttactgggaa aaaagccggc agacctgcca 734
atctttgggt ggcagttact acaaattaat gggcagatg 773

```

```

<210> 22
<211> 58
<212> PRT
<213> Murinae gen. sp.

```

```

<220>
<221> misc_feature
<223> Isoform 2

```

```

<400> 22

```

```

Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1          5          10          15

```

```

Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro
20          25          30

```

```

Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
35          40          45

```

```

Ser Val Thr Leu Ile Val Gln Trp Thr Gln
50          55

```

```

<210> 23
<211> 495
<212> DNA
<213> Murinae gen. sp.

```

```

<220>
<221> CDS
<222> (1)..(495)
<223>

```

```

<220>
<221> misc_feature
<223> Isoform 3

```


<400> 23
 atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag 48
 Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
 1 5 10 15

 aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca 96
 Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro
 20 25 30

 tgg tgg ttc cct gct gct atg act ctg gtc atc ctc tgc ctg gtg ttg 144
 Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
 35 40 45

 tca gtg acc ctt att gta cag tgg aca caa tta cgc cag gta tct gac 192
 Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp
 50 55 60

 ctc tta aaa caa tac caa gcg aac ctt act cag cag gat cgt atc ctg 240
 Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu
 65 70 75 80

 gaa ggg cag atg tta gcc cag cag aag gca gaa aac act tca ccg caa 288
 Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Pro Gln
 85 90 95

 tca aag aag gaa ctg aaa gga aag ata gac acc ctc acc cag aag ctg 336
 Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu
 100 105 110

 aac gag aaa tcc aaa gag cag gag gag ctt cta cag aag aat cag aac 384
 Asn Glu Lys Ser Lys Glu Gln Glu Leu Leu Gln Lys Asn Gln Asn
 115 120 125

 ctc caa gaa gcc ctg caa aga gct gca aac tct tca gag gag tcc cag 432
 Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln
 130 135 140

 aga gaa ctc aag gga aag ata gac acc ctc acc ttg aag ctg aac gag 480
 Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu
 145 150 155 160

 aaa tcc aaa gag cag 495
 Lys Ser Lys Glu Gln
 165

<210> 24
 <211> 165
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> Isoform 3

<400> 24

Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
 1 5 10 15

Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro
20 25 30

Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
35 40 45

Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp
50 55 60

Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu
65 70 75 80

Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Pro Gln
85 90 95

Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu
100 105 110

Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn
115 120 125

Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu Glu Ser Gln
130 135 140

Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys Leu Asn Glu
145 150 155 160

Lys Ser Lys Glu Gln
165 A

<210> 25
<211> 621
<212> DNA
<213> Murinae gen. sp.

<220>
<221> CDS
<222> (1)..(621)
<223>

<220>
<221> misc_feature
<223> Isoform 4

<400> 25
atg act ttt gat gac aag atg aag cct gcg aat gac gag cct gat cag
Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15

48

aag tca tgt ggc aag aag cct aaa ggt ctg cat ttg ctt tct tcc cca
Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro

96

| 20 | | | | | | | | | | 25 | | | | | 30 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| tgg | tgg | ttc | cct | gct | gct | atg | act | ctg | gtc | atc | ctc | tgc | ctg | gtg | ttg | 144 | | | | |
| Trp | Trp | Phe | Pro | Ala | Ala | Met | Thr | Leu | Val | Ile | Leu | Cys | Leu | Val | Leu | | | | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | | | | |
| tca | gtg | acc | ctt | att | gta | cag | tgg | aca | caa | tta | cgc | cag | gta | tct | gac | 192 | | | | |
| Ser | Val | Thr | Leu | Ile | Val | Gln | Trp | Thr | Gln | Leu | Arg | Gln | Val | Ser | Asp | | | | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | | | | |
| ctc | tta | aaa | caa | tac | caa | gcg | aac | ctt | act | cag | cag | gat | cgt | atc | ctg | 240 | | | | |
| Leu | Leu | Lys | Gln | Tyr | Gln | Ala | Asn | Leu | Thr | Gln | Gln | Asp | Arg | Ile | Leu | | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | | | | |
| gaa | ggg | cag | atg | tta | gcc | cag | cag | aag | gca | gaa | aac | act | tca | cag | gaa | 288 | | | | |
| Glu | Gly | Gln | Met | Leu | Ala | Gln | Gln | Lys | Ala | Glu | Asn | Thr | Ser | Gln | Glu | | | | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | | | | |
| tca | aag | aag | gaa | ctg | aaa | gga | aag | ata | gac | acc | ctc | acc | cag | aag | ctg | 336 | | | | |
| Ser | Lys | Lys | Glu | Leu | Lys | Gly | Lys | Ile | Asp | Thr | Leu | Thr | Gln | Lys | Leu | | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | | |
| aac | gag | aaa | tcc | aaa | gag | cag | gag | gag | ctt | cta | cag | aag | aat | cag | aac | 384 | | | | |
| Asn | Glu | Lys | Ser | Lys | Glu | Gln | Glu | Glu | Leu | Leu | Gln | Lys | Asn | Gln | Asn | | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | | |
| ctc | caa | gaa | gcc | ctg | caa | aga | gct | gca | aac | ttt | tca | ggg | cct | tgt | cca | 432 | | | | |
| Leu | Gln | Glu | Ala | Leu | Gln | Arg | Ala | Ala | Asn | Phe | Ser | Gly | Pro | Cys | Pro | | | | | |
| | | 130 | | | | 135 | | | | | 140 | | | | | | | | | |
| caa | gac | tgg | ctc | tgg | cat | aaa | gaa | aac | tgt | tac | ctc | ttc | cat | ggg | ccc | 480 | | | | |
| Gln | Asp | Trp | Leu | Trp | His | Lys | Glu | Asn | Cys | Tyr | Leu | Phe | His | Gly | Pro | | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | | |
| ttt | agc | tgg | gaa | aaa | aac | cgg | cag | acc | tgc | caa | tct | ttg | ggg | ggc | cag | 528 | | | | |
| Phe | Ser | Trp | Glu | Lys | Asn | Arg | Gln | Thr | Cys | Gln | Ser | Leu | Gly | Gly | Gln | | | | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | | | | |
| tta | cta | caa | att | aat | ggg | gca | gat | gat | ctg | aca | ttc | atc | tta | caa | gca | 576 | | | | |
| Leu | Leu | Gln | Ile | Asn | Gly | Ala | Asp | Asp | Leu | Thr | Phe | Ile | Leu | Gln | Ala | | | | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | | | | |
| att | tcc | cat | acc | acc | tcc | cgg | ttc | tgg | att | gga | ttg | cat | cgg | aag | | 621 | | | | |
| Ile | Ser | His | Thr | Thr | Ser | Pro | Phe | Trp | Ile | Gly | Leu | His | Arg | Lys | | | | | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | | | | |

<210> 26
 <211> 207
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> Isoform 4

<400> 26

Met Thr Phe Asp Asp Lys Met Lys Pro Ala Asn Asp Glu Pro Asp Gln
1 5 10 15

Lys Ser Cys Gly Lys Lys Pro Lys Gly Leu His Leu Leu Ser Ser Pro

20 25 30
 Trp Trp Phe Pro Ala Ala Met Thr Leu Val Ile Leu Cys Leu Val Leu
 35 40 45
 Ser Val Thr Leu Ile Val Gln Trp Thr Gln Leu Arg Gln Val Ser Asp
 50 55 60
 Leu Leu Lys Gln Tyr Gln Ala Asn Leu Thr Gln Gln Asp Arg Ile Leu
 65 70 75 80
 Glu Gly Gln Met Leu Ala Gln Gln Lys Ala Glu Asn Thr Ser Gln Glu
 85 90 95
 Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys Leu
 100 105 110
 Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln Asn
 115 120 125
 Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Phe Ser Gly Pro Cys Pro
 130 135 140
 Gln Asp Trp Leu Trp His Lys Glu Asn Cys Tyr Leu Phe His Gly Pro
 145 150 155 160
 Phe Ser Trp Glu Lys Asn Arg Gln Thr Cys Gln Ser Leu Gly Gly Gln
 165 170 175
 Leu Leu Gln Ile Asn Gly Ala Asp Asp Leu Thr Phe Ile Leu Gln Ala
 180 185 190
 Ile Ser His Thr Thr Ser Pro Phe Trp Ile Gly Leu His Arg Lys
 195 200 205

<210> 27
 <211> 712
 <212> DNA
 <213> Murinae gen. sp.

<220>
 <221> misc_feature
 <223> Isoform 5

<400> 27
 atgacttttg atgacaagat gaagcctgcg aatgacgagc ctgatgagaa gtcattgtggc 60
 aagaagccta aaggctctgca tttgctttct tccccatggg ggttcctctgc tgctatgact 120
 ctggtcatcc tctgcctggg gttgtcagtg acccttattg tacagtggac acaatgatcg 180

```

tatacctggaa gggcagatgt tagcccagca gaaggcagaa aacacttcac aggaatcaaa 240
gaaggaactg aaaggaaaga tagacaccct caccagaag ctgaacgact ccaaagagca 300
ggaggagcta ccccccccc gaacctccaa gaagccctgc aaagagctgc aaactcttca 360
ggtccttgtc cacaagactg gctctggcat aaagaaaact gttacctctt ccatgggccc 420
tttagctggg aaaaaaaccg gcagacctgc caatctttgg gtgggcagtt actacaaatt 480
aatggtgcag atgatctgac attcatctta caagcaattt cccataccac ctccccttct 540
tggattggat tgcacgga gaagcctggc aaccatgggt atgggagaat ggacttcttt 600
gaattttaat ttttaagaca gggcggtttt acagtttttc ataaggactt gtgatactta 660
gagggctggg ttcgttgaaa tgattctatt ggtagcatg tagaaaaaa tt 712

```

```

<210> 28
<211> 721
<212> DNA
<213> Murinae gen. sp.

```

```

<220>
<221> misc_feature
<223> Isoform 6

```

```

<400> 28
atgacttttg atgacaagat gaagcctgcg aatgacgagc ctgatcagaa gtcattgtggc 60
aagaagccta aaggtctgca tttgctttct tccccatggg gggtccctgc tgctatgact 120
ctgggtcatcc tctgcctggg gttgtcagtg acccttattg tacagtggac acaataggag 180
tcccagagag aactcaaggg aaagatagac accctcacct tgaagctgaa cgagaaatcc 240
aaagagcagg aggagcttct acagaagaat cagaacctcc aagaagccct gcaaagagct 300
gcaaactttt caggctccttg tccacaagac tggctctggc ataaagaaaa ctgttacctc 360
ttccatgggc cttttagctg ggaaaaaac cggcagacct gccaatcttt ggggtggccag 420
ttactacaaa ttaatggtgc agatgatctg acattcatct tacaagcaat ttcccatacc 480
acctccccgt tctggattgg attgcatcgg aagaagcctg gccaacctatg gctatgggag 540
aatggaactc ctttgaattt tcaattcttt aagaccaggg gcgtttcttt acagctatat 600
tcatcaggca actgtgcata cttcaagac ggactgtgtt cgctgaaaac tgcattctaa 660
ttgcattcag catatgtcaa aagaagacaa atcatttgca aatttagtga atctaaagaa 720
t 721

```

```

<210> 29
<211> 46
<212> PRT
<213> Murinae gen. sp.

```

<220>
 <221> MISC_FEATURE
 <223> ISOFORM 1 REPEAT #1

<400> 29

Glu Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu
 35 40 45

<210> 30
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> MISC_FEATURE
 <223> ISOFORM 1 REPEAT #2

<400> 30

Glu Ser Gln Arg Glu Leu Lys Gly Lys Ile Asp Thr Ile Thr Arg Lys
 1 5 10 15

Leu Asp Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Met Ile Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu
 35 40 45

<210> 31
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> MISC_FEATURE
 <223> ISOFORM 1 REPEAT #3

<400> 31

Glu Ser Gln Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Phe Ser Gly
 35 40 45

<210> 32
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> MISC_FEATURE
 <223> ISOFORM 3 REPEAT #1

<400> 32

Gln Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu
 35 40 45

<210> 33
 <211> 24
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> MISC_FEATURE
 <223> ISOFORM 3 REPEAT #3 PARTIAL

<400> 33

Glu Ser Gln Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln
 20

<210> 34
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.

<220>
 <221> MISC_FEATURE
 <223> ISOFORM 4 REPEAT #1

<400> 34

Glu Ser Lys Lys Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Gln Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Phe Ser Gly
 35 40 45

<210> 35
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.
 <220>
 <221> MISC_FEATURE
 <223> ISOFORM 7 REPEAT#2

<400> 35

Glu Ser Gln Arg Glu Leu Lys Gly Lys Ile Asp Thr Ile Thr Arg Lys
 1 5 10 15

Leu Asp Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Met Ile Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Ser Ser Glu
 35 40 45

<210> 36
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.
 <220> A
 <221> MISC_FEATURE
 <223> ISOFORM 7 REPEAT#3

<400> 36

Glu Ser Gln Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Phe Ser Gly
 35 40 45

<210> 37
 <211> 46
 <212> PRT
 <213> Murinae gen. sp.
 <220>

<221> MISC_FEATURE
 <223> ISOFORM 8 REPEAT#3

<400> 37

Glu Ser Gln Arg Glu Leu Lys Gly Lys Ile Asp Thr Leu Thr Leu Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Glu Glu Leu Leu Gln Lys Asn Gln
 20 25 30

Asn Leu Gln Glu Ala Leu Gln Arg Ala Ala Asn Phe Ser Gly
 35 40 45

<210> 38
 <211> 46
 <212> PRT
 <213> Homo sapiens

<400> 38

Glu Ser Glu Asn Glu Leu Lys Glu Met Ile Glu Thr Leu Ala Arg Lys
 1 5 10 15

Leu Asn Glu Lys Ser Lys Glu Gln Met Glu Leu His His Gln Asn Leu
 20 25 30

Asn Leu Gln Glu Thr Leu Lys Arg Val Ala Asn Cys Ser Ala
 35 40 45

<210> 39
 <211> 44
 <212> PRT
 <213> Unknown

<220>
 <223> SIGNATURE SEQUENCE

<220>
 <221> MISC_FEATURE
 <222> (2)..(43)
 <223> X = ANY AMINO ACID

<400> 39

Ser Xaa Xaa Glu Leu Lys Xaa Xaa Ile Xaa Thr Xaa Xaa Xaa Lys Leu
 1 5 10 15

Xaa Glu Lys Ser Lys Glu Gln Xaa Glu Leu Xaa Xaa Xaa Xaa Xaa Asn
 20 25 30

Leu Gln Glu Xaa Leu Xaa Arg Xaa Ala Asn Xaa Ser
 35 40

<210> 40
 <211> 44
 <212> PRT
 <213> Unknown

 <220>
 <223> SIGNATURE SEQUENCE COMMON TO MOUSE AND HUMAN

 <220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> X = E, Q, OR K

 <220>
 <221> MISC_FEATURE
 <222> (3)..(3)
 <223> X = N, R, OR K

 <220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> X = E OR G

 <220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> X = M OR K

 <220>
 <221> MISC_FEATURE
 <222> (10)..(10)
 <223> X = E OR D

 <220>
 <221> MISC_FEATURE
 <222> (12)..(12)
 <223> X = L OR I

 <220>
 <221> MISC_FEATURE
 <222> (13)..(13)
 <223> X = A OR T

 <220>
 <221> MISC_FEATURE
 <222> (14)..(14)
 <223> X = R, L, OR Q

 <220>
 <221> MISC_FEATURE
 <222> (17)..(17)
 <223> X = N OR D

<220>
 <221> MISC_FEATURE
 <222> (24)..(24)
 <223> X = M OR E

<220>
 <221> MISC_FEATURE
 <222> (27)..(27)
 <223> X = H OR L

<220>
 <221> MISC_FEATURE
 <222> (28)..(28)
 <223> X = H OR Q

<220>
 <221> MISC_FEATURE
 <222> (29)..(29)
 <223> X = Q, K OR M

<220>
 <221> MISC_FEATURE
 <222> (30)..(30)
 <223> X = N OR I

<220>
 <221> MISC_FEATURE
 <222> (31)..(31)
 <223> X = L OR Q

<220>
 <221> MISC_FEATURE
 <222> (36)..(36)
 <223> X = T OR A

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> X = K OR Q

<220>
 <221> MISC_FEATURE
 <222> (40)..(40)
 <223> X = V OR A

<220>
 <221> MISC_FEATURE
 <222> (43)..(43)
 <223> X = C, F OR S

<400> 40

Leu Gln Glu Xaa Leu Xaa Arg Xaa Ala Asn Xaa Ser
35 40

[illegible]